



## **FY14 Annual Report Narrative**

### **1. What were your highlights and achievements for the period?**

FY14 started with a real challenge for AFSC when the federal government shut down in October 2013. This forced the Alaska Wildland Fire Coordinating Group (AWFCG) to cancel the Alaska Interagency Fall Fire Review, and thus AFSC had to cancel our associated Fire Science Workshop, which has been held annually in conjunction with the Fall Fire Review since 2010. We were particularly excited about the 2013 workshop, as the AWFCG had invited us to help plan the Fall Fire Review and organize a joint session that overlapped with our Fire Science Workshop. In hopes of additional opportunities for public outreach, networking, and mutual understanding during that week, we had also organized 2 evening public lectures about fire ecology and climate change that were designed to draw a mix of managers, scientists and the general public.

With guidance from our Advisory Board, over the following months we developed and pursued a Plan B that presented the content from the canceled workshop in other formats, including webinars, posters, and a new half-day workshop in association with the Spring Interagency Fire Management Officers meeting in early April 2014 (attendance 53). We also rescheduled the public talks for that week (attendance 42). Evaluations from the Spring Workshop indicated that our core audience of fire managers wanted us to try convening 2 annual half-day workshops (one in April and one in October, each in association with a statewide interagency management meeting) rather than a single full day in October. We shifted to this schedule this year and will evaluate its utility for our audience next year.

AWFCG continues to include AFSC as a partner in developing the agendas for its spring and fall meetings, which allows us to present topics using an integrated approach. This year AWFCG requested to include some of the content that was initially planned for the AFSC workshop as part of the annual Fall Fire Review. For example, AFSC organized a session for the 2014 Interagency Fall Fire Review on the use of Unmanned Aerial Vehicles on wildland fire incidents; both scientists and managers presented information and joined in a lively panel discussion. We consider this to be a milestone in consortium/manager collaboration and coordination.

We hosted 5 webinars in FY14 (total attendance 177) on a mix of research and management topics. We were able to revive and begin updating a unique database for fire researchers. The Alaska Fire and Fuels Research Map, which had fallen into disuse after some technical issues, is now functioning again, and AFSC is coordinating updates from its contributors (<https://www.frames.gov/partner-sites/afsc/products-and-tools/fire-and-fuels-research-map/>).

## *2. What were your priorities and initiatives?*

Our priorities are directed by the community we serve; AFSC works closely with the AWFCG's Fire Modeling and Analysis Committee and Fire Research and Applications Committee, which both identified improving the **use of the Canadian Forest Fire Danger Rating System (CCFDRS) by Alaska managers** as a high priority. Participants at AFSC's Spring workshop urged us to organize a "CCFDRS Summit" involving Alaska, Canadian, and Great Lakes managers and researchers. Under the auspices of AWFCG, we formed an interagency organizing committee that met monthly from May through October to plan the summit, which was held in late October 2014 (so will be reported on for FY15). As part of the lead up to that event, AFSC and the committee also organized a visit to Alaska by Mike Wotton, who leads the Canadian Forest Service effort to update CCFDRS. Mike visited Fairbanks for a week in August for presentations and field trips at both management and academic venues. Mike's visit gave the management community a great way to advance their thinking about the challenges and opportunities they face in implementing CCFDRS in Alaska before the summit itself. Materials from that visit are on the AFSC website (<https://www.frames.gov/partner-sites/afsc/events/previous-events/previous-webinars/wotton/>)

A second focus area for FY14 and beyond is **fuel treatment effectiveness**, which is a perennial priority for Alaska's fire and resource managers (<https://www.frames.gov/partner-sites/afsc/partner-groups/frdac/research-needs-list/topic4/>) and was a topical theme of our October 2014 annual workshop. This priority was heightened in May 2014, when the Funny River fire approached treatment projects established by US Fish and Wildlife Service and the Kenai Peninsula Borough. The treatments were critical in enabling safe burnout operations and preventing fire spread into evacuated neighborhoods (R. Allen, pers comm.), while managers were able to organize an opportunistic case study of fire behavior and treatment effects. The Funny River case study was part of a focus on fuel treatment research during the October 2014 Fire Science workshop (<https://www.frames.gov/partner-sites/afsc/events/previous-events/workshops/2014-fall-workshop/>). AFSC also assisted with the development of a successful interagency proposal in response to JFSP 14-5-01, which will address many of the state's identified research needs on the cost effectiveness and longevity of fuels treatment in boreal systems. We look forward to working with the project team, which includes AFSC fire ecologist Randi Jandt, as the project moves forward.

Another major priority for FY14 derived from events at the University of Alaska Fairbanks (UAF), which was designated by the Federal Aviation Administration in December 2013 as one of 6 test sites for integrating **Unmanned Aircraft Systems (UAS)** into the national airspace. Researchers associated with the program immediately asked for AFSC's assistance with contacting appropriate personnel to allow test UAS flights in association with fire management activities. We facilitated these contacts and shared information between these groups. Both of Alaska's major wildland fires of 2014 hosted UAS flights that tested their integration with existing incident management and aviation systems as well as sensor technologies and utility for management application. As noted above, this effort resulted in a joint session at the Fall Fire Review, and we expect it to continue and accelerate in coming years. We are assisting the UAF UAS program to form an advisory board specifically to support the development of UAS applications for wildland fire management. Materials are on the AFSC website, with more coming soon (<https://www.frames.gov/partner-sites/afsc/events/previous-events/meetings/2014-bailey-uav-presentation/>)

### 3. How does this Annual Progress Report compare to your planned work?

The major deviation from our plans was the cancellation of the October 2013 workshop and implementation of "Plan B" (described above), which has led us to restructure our annual workshop schedule from one full day in October to 2 half days in April and October; we will evaluate our participants' perception of the new schedule's effectiveness next year.

Otherwise, the achievements of FY14 were similar to our plans, which were developed in partnership with our advisory board. The plan was deliberately somewhat open-ended, as the board values AFSC's ability to remain nimble and assist with specific opportunities and priorities as they arise.

### 4. Did you engage new audiences and develop new partnerships?

In addition to our core audience of Alaska's fire managers, we continue to work to engage faculty and students, resource managers, and the general public in fire science issues. In FY14, we used several approaches to connect with these audiences.

We regularly attend professional meetings (American Geophysical Union, International Association of Wildland Fire, Alaska Forum on the Environment), share information about upcoming university symposia and student defenses, record and share presentations when feasible, and actively work to get academic participation at our events. We organize and host brainstorming sessions with fire managers and scientists to discuss proposal ideas. We organized and hosted 2 evening public lectures in April 2014 on climate change and fire ecology, which drew 42 people, a mix of public, scientists, and managers. We plan to organize future events like these in partnership

with the university's Summer Sessions and Lifelong Learning program, which sponsors informal education activities year-round and has an extensive marketing reach.

One new approach grew out of discussions with agency leadership in FY13, which recognized that fire science issues are of general interest to many resource managers who may not be able to participate in our workshops or webinars. To serve this community, AFSC's fire ecologist, Randi Jandt, delivered a series of 4 brown-bag seminars over the lunch hour at state and federal agency offices in Anchorage and Fairbanks in March and April (total attendance 60 from about 9 agencies). "What's New in Fire Science" presented a potpourri of new findings aimed at a general management audience and was extremely well-received. We expect to update and continue this approach in coming years.

In a new partnership, AFSC fire ecologist Randi Jandt serves on the Interagency Arctic Research Policy Committee's (IARPC) Wildland Fire Implementation Team, a body that was chartered in mid-2013 to addresses research gaps and areas for improvement in knowledge relating to wildfire activity, succession, and effects on local communities in the Arctic, specifically focusing on the tundra environment. AFSC hosts the team's website, shares its progress with the management community, and is using some of its products to guide activities ([https://www.frames.gov/partner-sites/afsc/partner-groups/iarpc\\_fire\\_team/](https://www.frames.gov/partner-sites/afsc/partner-groups/iarpc_fire_team/)).

AFSC is also pursuing new partnerships with several programs in remote sensing, which has tools that are underutilized but have great potential for Alaska fire management. We hope to organize a workshop in partnership with Vince Ambrosia, NASA's wildland fire program manager, in FY15; this would build on his recent inventory of NASA sensors for the IARPC team. We are in regular contact with Eric Kasischke, the co-chair of the NASA Arctic Boreal Vulnerability Experiment, which will be launching a 10-year long set of studies in Alaska and western Canada with a focus on wildland fire, and hope to assist fire managers in contributing to those studies and products. Another key player in this topic is the Geographic Information Network of Alaska (GINA), which provides remote sensing products for the region. We regularly include GINA in our discussions and workshops.

#### 5. Do you see trends developing?

With activities and priorities described above, FY14 saw AFSC's partnership with the interagency fire management community deepen and strengthen. We have become one of the resources that the community draws on to get things done.

#### 6. What will you build on for future years and what will you do differently?

We will definitely build on our existing trusted relationships and strengths in partnership with the interagency fire management community and our growing relationships with

researchers and scientists to continue the progress made this year on the 3 priority topics outlined in section 2. All of these require considerable work in convening, mediating, translating, organizing and relationship building to bring to fruition. We will continue to survey our constituents and adjust our methods and timing to meet their needs, as we did this year in shifting from one annual full-day workshop to two semi-annual half-day workshops. We will build on this year's public lectures and leverage partners such as the university to help us reach a larger public audience. We will continue with the "brown-bag" lecture approach to engage agency resource managers in smaller venues, on site, and with more frequent contact. We will continue periodic meetings with partner agency and organization leads (aka "Big Dogs") to continue building support for and getting feedback on our activities. We will pursue hiring additional part-time temporary employees to assist in keeping the Alaska Fire Reference Data Base and Fire and Fuels Map up-to-date and assist with social media such as Facebook posts and twitter feeds.

## **Alaska Fire Science Consortium**

### **Plan of work for FY15**

#### October-December 2014

- 6-9 October: AWFCG Interagency Fall Fire Review. AFSC helped organize and invited speakers for session on Unmanned Aircraft Systems (UAS) use on 2014 fire incidents.
- 9 October: AFSC Fall Fire Science Workshop (half-day). This workshop was thematically organized around fuel treatments and new partnerships for research opportunities (49 participants from 12 agencies).
- October: Under guidance of Fire Research and Development Committee, updated Alaska Research Needs List with current priorities.
- 28-30 October: Canadian Forest Fire Danger Rating System Summit. AFSC organized under the auspices of AWFCG. Invited visiting speakers from Canada, Great Lakes, and Alaska to discuss improved use of this key management tool. (53 participants from 13 agencies).
- 4-6 November: Attended Climate, Conservation, and Community in Alaska and Northwest Canada, in Anchorage, hosted by the USGS funded Alaska Climate Science Center. AFSC coordinator invited speaker at a session on “Beyond Making it Available: Making Science Useful and Used by Decision Makers.”
- 7 November: Meeting and discussion with AWFCG Chair Charlie Sink and Chugachmiut Forester Nathan Lojewski.
- November: Assist teams proposing to JFSP FON with contacts, development of science delivery plans, and letters of support.
- 19 November: AFSC advisory board teleconference.
- 1 December: Jen Northway will join AFSC as temporary staff for 5 weeks to assist with website upgrade, Fire Research Data Base and Map updates, Fire Reference Database. Plan to hire an additional part-time temporary staff to assist with these tasks and with social media posts (i.e. Facebook and twitter).
- December: assist UAF UAS program to form advisory board for fire applications.
- 9 December: AFSC webinar by Shirley Zylstra, USFS, on retardant updates.
- 15-19 December: American Geophysical Union Fall Meeting. AFSC will attend, present all-consortia poster at “The Role of Fire in the Earth System: Understanding Drivers, Feedbacks, and Interactions with the Land and Atmosphere Toward Improved Fire Management”, and help staff JFSP consortia booth.

#### January-March 2015

- 11 January: Randi Jandt returns to full-time status in Fairbanks until May 2015. Continue writing research briefs and producing other outreach products.
- January: assist fire management community with contributions to NASA Arctic Boreal Vulnerability Experiment call for proposals.
- Possible webinar topics:

- Follow up on CFFDRS summit
- Laurie Thorpe/Scott Guyer: BLM Assessment, Inventory, and Monitoring Strategy
- Bethany Schulz: Forest Inventory Analysis in Alaska
- April Melvin: Forest management effects on plants, soils, and permafrost
- Ben Jones: Tundra fire detection
- February: Present at All Hands, All Lands meeting of fuels program managers and prevention specialists on Kenai Peninsula.
- February/March: present “brown bag” seminars at agency offices in Anchorage, Fairbanks, and Kenai Peninsula.
- Mid-February: in person AFSC advisory board meeting. Submit renewal proposal to JFSP (20 February).
- March: work with AWFCG Spring FMO meeting planners.

#### April-June 2015

- 31 March-2 April: AWFCG Spring Fire Management Officers and Incident Management Teams Meeting. AFSC will help with agenda development and inviting speakers as needed.
- 2 April: AFSC Spring Fire Science Workshop (half day). Topics will include CFFDRS follow up, and Devon Barnes, University of Alberta, on sprinkler efficacy in structure protection in interior Alaska.
- Distribute national evaluation survey. Analyze data.
- Possible workshop on NASA fire sensors.
- Possible field workshop on fuel moisture or other CFFDRS topic.
- Assist UAF UAS program with plans for deployment on prescribed burns and incidents.

#### July-September 2015

- Possible field workshop with Effects of management practices on succession and C dynamics project (Michelle Mack and Ted Schuur)
- August: AFSC Advisory Board teleconference.
- August/September: work with AWFCG Interagency Fall Fire Review planners.
- Plan AFSC half-day October workshop.



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Active ID: **09-S-04-7**Status: **Active Extended**Title: **Wildland Fire Science Delivery and Outreach in Alaska**Principal Investigator: **Sarah F. Trainor**Agency/Organization: **University of Alaska-Fairbanks, SNRAS-School of Natural Resources & Agricultural Sciences**Reporting Year: **2014****Table 1 - Participation by Organization (as shown from your mailing list subscribers)**

Organization	Unique Total Number of Participants
Tribal Nations	10
States	64
Counties/Burroughs/Parishes	3
Cities and Local Communities	5
Regional Authorities	0
Private Landowner	19
Private Associations	0
Companies	8
Consultants	4
Foreign Organizations & Individuals	30
University and College Faculty or Researchers	50
University and College Students	16
Prescribed Fire Councils	0



Fire Learning Network and The Nature Conservancy	<input type="text" value="3"/>
NGOs (not listed above)	<input type="text" value="13"/>
Bureau of Indian Affairs	<input type="text" value="4"/>
Bureau of Land Management	<input type="text" value="72"/>
Fish and Wildlife Service	<input type="text" value="24"/>
Forest Service (National Forests, Grasslands, State and Private Forestry)	<input type="text" value="16"/>
Forest Service Research	<input type="text" value="20"/>
Geological Survey	<input type="text" value="9"/>
National Park Service	<input type="text" value="21"/>
Natural Resources Conservation Service	<input type="text" value="0"/>
US Bureau of Reclamation	<input type="text" value="0"/>
NOAA and National Weather Service	<input type="text" value="5"/>
ARS	<input type="text" value="0"/>
NASA	<input type="text" value="1"/>
Department of Defense including Coast Guard	<input type="text" value="4"/>
United States Fire Administration	<input type="text" value="0"/>

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Activity (conducted, hosted, organized, facilitated, sponsored or produced)	Completed Activities (current year)	Estimated Total Number of Participants (current year)
Talks and Personal Briefings About The Exchange	12	98
Newsletters Produced	8	3127
Fact Sheets and Handouts Produced	6	200
Tweets	53	547
Facebook Postings	186	151
Other Social Media (please identify)	0	0
Blog Posts	26	1334
Webinars	5	177
Podcasts	0	0
Guidelines or Guidebooks	2	100
Syntheses	1	65
Encyclopedia	0	0

Database	<input type="text" value="1"/>	<input type="text" value="65"/>
Conferences/Workshops	<input type="text" value="1"/>	<input type="text" value="53"/>
Conference or Symposia Presentation (note participants are for the talk not the entire conference)	<input type="text" value="0"/>	<input type="text" value="0"/>
Poster Presentation (note persons engaged not the entire conference)	<input type="text" value="0"/>	<input type="text" value="0"/>
Short Courses and Continuing Education Units	<input type="text" value="3"/>	<input type="text" value="47"/>
Academic Credit Courses	<input type="text" value="1"/>	<input type="text" value="6"/>
Bibliography or Annotated Bibliography	<input type="text" value="1"/>	<input type="text" value="75"/>
Video/Vimeo productions	<input type="text" value="6"/>	<input type="text" value="123"/>
Requests for Information, Assistance, or Referrals	<input type="text" value="62"/>	<input type="text" value="312"/>
Field Trip, Tour, Demonstration or Roadshow	<input type="text" value="4"/>	<input type="text" value="339"/>
Field Consultations and Expert Cadres	<input type="text" value="13"/>	<input type="text" value="176"/>
Training Sessions	<input type="text" value="1"/>	<input type="text" value="9"/>
Leadership Briefings	<input type="text" value="4"/>	<input type="text" value="12"/>




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